## SEQUENCE LISTING

```
<110> Chau, Raymond M.W.
   <120>
         Isolation and Use of Motoneurontropic Factors
   <130>
         12592-4
   <140> None
   <141> 2001-11-20
   <150> US 09/633,447
   <151> 2000-08-07
   <150> US 08/9928862
   <151>
         1997-09-12
   <150> US 08/751225
   <151> 1996-11-15
   <150>
         US 60/026792
  <151> 1996-09-27
   <160>
        5
   <170>
        PatentIn version 3.0
<210>
         1
<211>
         1443
<212> DNA
  <213> Homo Sapiens
  <400>
  cgggcttatt attccactga tgagaacctg atcctttccc cactcctggg taacgtctgc
  ttctccagct cccagtacag catctgcttc acgctgggct cctttgccaa gatctatgcc
  gacacctttg gtgacattaa ttaccaagaa tttgctaaaa gactctgggg tgacatctac
    180
  ttcaacccta agacgcgaaa gttcaccaaa aaggeeecaa ctagcagetc ccagagaagt
    240
  ttcgtggagt ttatcttgga gcctctttat aagatcctcg cccaggttgt aggtgacgtg
    300
```

Sheep

ij.

Mary Comments

- gacaccagec teccaeggae ectagaegag ettggeatec acetgaegaa ggaggagetg 360
- aagctgaaca teegeeett geteaggetg gtetgeaaaa agttetttgg egagtteaca 420
- ggetttgtgg acatgtgtgt geageatate cetteteeaa aggtgggege caageecaag 480
- attgagcaca cctacaccgg tggtgtggac tccgacctcg gcgaagctat gagtgactgt 540
- gaccctgatg gccccctgat gtgccacact actaagatgt tcagcacaca tgatggagtc 600
- cagtiticace cettitggeeg ggtgetgagt ggeaceatte atgetgggea geetgtgaag 660
- gttctggggg agaactacac cctggaggat gaggaagact ccccaatttg ccccgtgggc 720
- cgcctttgga tctctgtggc cagctaccac atcgaggtga accgtgttcc tgctggcaac 780
- tgggttctga ttgaaggtgt tgatcaacca attgtgaaga cagcaaccat aaccgaaccc 840
- cgaggcaatg aggaggctca gattttccga cccttgaagt tcaataccac atctgttatc 900
- aagattgctg tggagccagt caacccctca gagctgccca agatgcttga tggcctgcgc 960
- aaggtcaaca agagctatcc atccctcacc accaaggtgg aggagtctgg cgagcatgtg 1020
- atcctgggca ctggggagct ctacctggac tgtgtgatgc atgatttgcg gaagatgtac 1080
  - tcagagatag acatcaaggt ggctgaccca gttgtcacgt tttgtgagac ggtcgtggaa 1140
  - acatectece teaagtgett tgetgaaacg ectaataaga agaacaagat eaceatgatt 1200
  - gctgagcctc ttgagaaggg cctggcagag gacatagaga atgaggtggt ccagattacg 1260

```
tggaacagga agaagctggg agagttcttc cagaccaagt acgattggga tctgctggct
   1320
  qcccqttcca tctgggcttt tggccctgat gcgactggcc ccaacattct ggtggatgat
   1380
  actctqccct ctqaqqtqqa caaqgctctt cttggttcag tgaaggacag catcgttcaa
    1440
  ggt
   1443
  <210>
         2
  <211> 927
   <212>
         DNA
  <213> Homo Sapiens
<400> 2
  ttggggacat tttggggtga cacactgaac tgctggatgc tatcagcatt tagtaggtat
      60
  gctcgatgtc ttgcagaagg acatgatggt cctacacagt aaggaatgga ttacctacaa
    120
  tattaatage ageeteecat acacactttt gacaccette eetaaaggat taatatgete
🕍 caacctteet gteeceacag tteagtgget etecetacee teaccatgat eggatgaaaa
240
  aaaataaggt ttcacagctt aagagtgaaa ttctggaatc caactacaag ctcataactg
   tagcatggaa cctggtagta gcataataaa taaattttta gtaagaggct taagaaattt
     360
   tagcaaaaaa agcactccct ttcttcctcc ctacatatct catatgtttt tcaacacaaa
     420
   aaattetgtg attttagaga aacttettae agtaetttta agtteaaaac eagatgetea
     480
   ttacagttct tttaaacacc aaactagtca tctcaaaaat atggctaact ctctggacta
     540
   aattccatag gaaaaattat taatttcaaa atgcctaatt tttgatcaat gctgaagagc
     600
```

1 ij.

A Section

ű

a sign

- caagcaatca tgtcctgctt ctcactcagg gcagagttct caggtcagaa gctccggagt 660
- ctgtcagaga ttaaaatatc atctcaacaa ttcacaagct acttctaagt gttaccctaa 720
- attagtcact aatcgtttct cccccaactc tatttcacaa attaaagttt acagaattga 780
- caaaaaccaa accaatgaaa caacccaggo tatttgcagg gggggggaaa gagatacccc 840
- aaaagtcaac cctatttaca cgtagttaaa agagtgatcc aacagatatt accctccata 900
- aagtacctaa aggcaggagc cggaatt 927
- <210> 3
- <211> 481
- <212> PRT
- <213> Homo Sapiens
- <400> 3
- Arg Ala Tyr Tyr Ser Thr Asp Glu Asn Leu Ile Leu Ser Pro Leu Leu 1 5 10 15
- Gly Asn Val Cys Phe Ser Ser Ser Gln Tyr Ser Ile Cys Phe Thr Leu 20 25 30
- Gly Ser Phe Ala Lys Ile Tyr Ala Asp Thr Phe Gly Asp Ile Asn Tyr 35 40 45
- Gln Glu Phe Ala Lys Arg Leu Trp Gly Asp Ile Tyr Phe Asn Pro Lys 50 55 60
- Thr Arg Lys Phe Thr Lys Lys Ala Pro Thr Ser Ser Ser Gln Arg Ser 65 70 75 80
- Phe Val Glu Phe Ile Leu Glu Pro Leu Tyr-Lys Ile Leu Ala Gln Val 85 90 95
- Val Gly Asp Val Asp Thr Ser Leu Pro Arg Thr Leu Asp Glu Leu Gly
  100 105 110

Ile His Leu Thr Lys Glu Glu Leu Lys Leu Asn Ile Arg Pro Leu Leu Arg Leu Val Cys Lys Lys Phe Phe Gly Glu Phe Thr Gly Phe Val Asp Met Cys Val Gln His Ile Pro Ser Pro Lys Val Gly Ala Lys Pro Lys Ile Glu His Thr Tyr Thr Gly Gly Val Asp Ser Asp Leu Gly Glu Ala Met Ser Asp Cys Asp Pro Asp Gly Pro Leu Met Cys His Thr Thr Lys Met Phe Ser Thr His Asp Gly Val Gln Phe His Pro Phe Gly Arg Val Leu Ser Gly Thr Ile His Ala Gly Gln Pro Val Lys Val Leu Gly Glu Asn Tyr Thr Leu Glu Asp Glu Glu Asp Ser Gln Ile Cys Thr Val Gly Arg Leu Trp Ile Ser Val Ala Arg Tyr His Ile Glu Val Asn Arg Val Pro Ala Gly Asn Trp Val Leu Ile Glu Gly Val Asp Gln Pro Ile Val Lys Thr Ala Thr Ile Thr Glu Pro Arg Gly Asn Glu Glu Ala Gln Ile Phe Arg Pro Leu Lys Phe Asn Thr Thr Ser Val Ile Lys Ile Ala Val Glu Pro Val Asn Pro Ser Glu Leu Pro Lys Met Leu Asp Gly Leu Arg Lys Val Asn Lys Ser Tyr Pro Ser Leu Thr Thr Lys Val Glu Glu Ser Gly Glu His Val Ile Leu Gly Thr Gly Glu-Leu Tyr Leu Asp Cys-Val-Met His Asp Leu Arg Lys Met Tyr Ser Glu Ile Asp Ile Lys Val Ala 

```
Asp Pro Val Val Thr Phe Cys Glu Thr Val Val Glu Thr Ser Ser Leu
                                                  380
                             375
       370
   Lys Cys Phe Ala Glu Thr Pro Asn Lys Lys Asn Lys Ile Thr Met Ile
                                                                    400
                                              395
                         390
   385
   Ala Glu Pro Leu Glu Lys Gly Leu Ala Glu Asp Ile Glu Asn Glu Val
                                                               415
                                          410
                    405
   Val Gln Ile Thr Trp Asn Arg Lys Lys Leu Gly Glu Phe Phe Gln Thr
                                      425
                420
   Lys Tyr Asp Trp Asp Leu Leu Ala Ala Arg Ser Ile Trp Ala Phe Gly
                                 440
   Pro Asp Ala Thr Gly Pro Asn Ile Leu Val Asp Asp Thr Leu Pro Ser
                                                   460
                             455
        450
   Glu Val Asp Lys Ala Leu Leu Gly Ser Val Lys Asp Ser Ile Val Gln
                                              475
$500
3000
   Gly
Will allow Min
    <210>
           4
<211>
           33
21
           PRT
    <212>
           Homo Sapiens
    <213>
.
Park
- 1
    <400> 4
Leu Gly Thr Phe Trp Gly Asp Thr Leu Asn Cys Trp Met Leu Ser Ala
                                                                15
                                           10
    Phe Ser Arg Tyr Ala Arg Cys Leu Ala Glu Gly His Asp Gly Pro Thr
                 20
    Gln
    <210>
           5
           99
    <211>
    <212> - DNA - - - -
    <213>
           Homo Sapiens
    <400>
    ttggggacat tttggggtga cacactgaac tgctggatgc tatcagcatt tagtaggtat
```

gctcgatgtc ttgcagaagg acatgatggt cctacacag 99

## "No the series with the series of the series

## SEQUENCE LISTING

```
<110> Chau, Raymond M.W.
      Isolation and Use of Motoneurontropic Factors
<120>
<130> 12592-4
<140> None
<141> 2001-11-20
<150> US 09/633,447
<151> 2000-08-07
<150> US 08/9928862
<151> 1997-09-12
<150> US 08/751225
<151> 1996-11-15
<150> US 60/026792
       1996-09-27
<151>
<160>
       5
<170> PatentIn version 3.0
<210> 1
<211> 1443
<212> DNA
<213> Homo Sapiens
<400> 1
cgggcttatt attccactga tgagaacctg atcctttccc cactcctggg taacgtctgc
ttctccagct cccagtacag catctgcttc acgctgggct cctttgccaa gatctatgcc
gacacctttg gtgacattaa ttaccaagaa tttgctaaaa gactctgggg tgacatctac
  180
ttcaacccta agacgcgaaa gttcaccaaa aaggccccaa ctagcagctc ccagagaagt
  240
ttcgtggagt ttatcttgga gcctctttat aagatcctcg cccaggttgt aggtgacgtg
  300
```

- gacaccagcc tcccacggac cctagacgag cttggcatcc acctgacgaa ggaggagctg 360
- aagctgaaca teegeeett geteaggetg gtetgeaaaa agttetttgg egagtteaca 420
- ggctttgtgg acatgtgtgt gcagcatatc ccttctccaa aggtgggcgc caagcccaag 480
- attgagcaca cctacaccgg tggtgtggac tccgacctcg gcgaagctat gagtgactgt 540
- gaccetgatg geceeetgat gtgecacact actaagatgt teageacaca tgatggagte 600
- cagtttcacc cctttggccg ggtgctgagt ggcaccattc atgctgggca gcctgtgaag 660 .
- gttctggggg agaactacac cctggaggat gaggaagact ccccaatttg ccccgtgggc 720
- cgcctttgga tctctgtggc cagctaccac atcgaggtga accgtgttcc tgctggcaac 780
- tgggttctga ttgaaggtgt tgatcaacca attgtgaaga cagcaaccat aaccgaaccc 840
- cgaggcaatg aggaggctca gattttccga cccttgaagt tcaataccac atctgttatc 900
- aagattgctg tggagccagt caacccctca gagctgccca agatgcttga tggcctgcgc 960
- aaggtcaaca agagctatcc atccctcacc accaaggtgg aggagtctgg cgagcatgtg
- atcctgggca ctggggagct ctacctggac tgtgtgatgc atgatttgcg gaagatgtac 1080
- tcagagatag acatcaaggt ggctgaccca gttgtcacgt tttgtgagac ggtcgtggaa 1140
- acatectece teaagtgett tgetgaaaeg eetaataaga agaacaagat eaccat<del>ga</del>tt 1200
- gctgagcctc ttgagaaggg cctggcagag gacatagaga atgaggtggt ccagattacg 1260

- tggaacagga agaagctggg agagttcttc cagaccaagt acgattggga tctgctggct 1320
- gcccgttcca tctgggcttt tggccctgat gcgactggcc ccaacattct ggtggatgat 1380
- actctgccct ctgaggtgga caaggctctt cttggttcag tgaaggacag catcgttcaa 1440

ggt 1443

- <210> 2
- <211> 927
- <212> DNA
- <213> Homo Sapiens
- <400> 2
- ttggggacat tttggggtga cacactgaac tgctggatgc tatcagcatt tagtaggtat 60
- gctcgatgtc ttgcagaagg acatgatggt cctacacagt aaggaatgga ttacctacaa 120
- tattaatagc agcctcccat acacactttt gacacccttc cctaaaggat taatatgctc 180
- caacetteet gteeceacag tteagtgget eteectacee teaccatgat eggatgaaaa 240
- aaaataaggt ttcacagctt aagagtgaaa ttctggaatc caactacaag ctcataactg 300
- tagcatggaa cctggtagta gcataataaa taaattttta gtaagaggct taagaaattt 360
- tagcaaaaaa agcactccct ttcttcctcc ctacatatct catatgtttt tcaacacaaa 420
- aaattetgtg attttagaga aacttettae agtaetttta agtteaaaac eagatgetea 480
- ttacagttct tttaaacacc aaactagtca tctcaaaaat atggctaact ctctggacta 540
- aattccatag gaaaaattat taatttcaaa atgcctaatt tttgatcaat gctgaagagc 600

- caagcaatca tgtcctgctt ctcactcagg gcagagttct caggtcagaa gctccggagt 660
- ctgtcagaga ttaaaatatc atctcaacaa ttcacaagct acttctaagt gttaccctaa 720
- attagtcact aatcgtttct cccccaactc tatttcacaa attaaagttt acagaattga 780
- caaaaaccaa accaatgaaa caacccaggc tatttgcagg gggggggaaa gagatacccc 840
- aaaagtcaac cctatttaca cgtagttaaa agagtgatcc aacagatatt accctccata 900
- aagtacctaa aggcaggagc cggaatt 927
- <210> 3
- <211> 481
- <212> PRT
- <213> Homo Sapiens
- <400> 3
- Arg Ala Tyr Tyr Ser Thr Asp Glu Asn Leu Ile Leu Ser Pro Leu Leu

  5 10 15
- Gly Asn Val Cys Phe Ser Ser Ser Gln Tyr Ser Ile Cys Phe Thr Leu 20 25 30
- Gly Ser Phe Ala Lys Ile Tyr Ala Asp Thr Phe Gly Asp Ile Asn Tyr 35 40 45
- Gln Glu Phe Ala Lys Arg Leu Trp Gly Asp Ile Tyr Phe Asn Pro Lys 50 55 60
- Thr Arg Lys Phe Thr Lys Lys Ala Pro Thr Ser Ser Gln Arg Ser 65 70 75 80
- Phe Val Glu Phe Ile Leu Glu Pro Leu Tyr Lys Ile Leu Ala Gln Val 85 90 95
- Val Gly Asp Val Asp Thr Ser Leu Pro Arg Thr Leu Asp Glu Leu Gly
  100 105 110

Ile His Leu Thr Lys Glu Glu Leu Lys Leu Asn Ile Arg Pro Leu Leu Arg Leu Val Cys Lys Lys Phe Phe Gly Glu Phe Thr Gly Phe Val Asp Met Cys Val Gln His Ile Pro Ser Pro Lys Val Gly Ala Lys Pro Lys Ile Glu His Thr Tyr Thr Gly Gly Val Asp Ser Asp Leu Gly Glu Ala Met Ser Asp Cys Asp Pro Asp Gly Pro Leu Met Cys His Thr Thr Lys Met Phe Ser Thr His Asp Gly Val Gln Phe His Pro Phe Gly Arg Val Leu Ser Gly Thr Ile His Ala Gly Gln Pro Val Lys Val Leu Gly Glu Asn Tyr Thr Leu Glu Asp Glu Glu Asp Ser Gln Ile Cys Thr Val Gly Arg Leu Trp Ile Ser Val Ala Arg Tyr His Ile Glu Val Asn Arg Val Pro Ala Gly Asn Trp Val Leu Ile Glu Gly Val Asp Gln Pro Ile Val 260 265 270 Lys Thr Ala Thr Ile Thr Glu Pro Arg Gly Asn Glu Glu Ala Gln Ile Phe Arg Pro Leu Lys Phe Asn Thr Thr Ser Val Ile Lys Ile Ala Val Glu Pro Val Asn Pro Ser Glu Leu Pro Lys Met Leu Asp Gly Leu Arg Lys Val Asn Lys Ser Tyr Pro Ser Leu Thr Thr Lys Val Glu Glu Ser Gly Glu His Val Ile Leu Gly Thr Gly Glu Leu Tyr Leu Asp Cys Val 

Met His Asp Leu Arg Lys Met Tyr Ser Glu Ile Asp Ile Lys Val Ala

```
The state of the s
```

```
Asp Pro Val Val Thr Phe Cys Glu Thr Val Val Glu Thr Ser Ser Leu
    370
Lys Cys Phe Ala Glu Thr Pro Asn Lys Lys Asn Lys Ile Thr Met Ile
                    390
Ala Glu Pro Leu Glu Lys Gly Leu Ala Glu Asp Ile Glu Asn Glu Val
                405
                                     410
                                                          415
Val Gln Ile Thr Trp Asn Arg Lys Lys Leu Gly Glu Phe Phe Gln Thr
            420
                                 425
                                                     430
Lys Tyr Asp Trp Asp Leu Leu Ala Ala Arg Ser Ile Trp Ala Phe Gly
                             440
Pro Asp Ala Thr Gly Pro Asn Ile Leu Val Asp Asp Thr Leu Pro Ser
                         455
                                             460
Glu Val Asp Lys Ala Leu Leu Gly Ser Val Lys Asp Ser Ile Val Gln
Gly
<210>
<211>
       33
<212>
       PRT
<213>
       Homo Sapiens
~<400>
       4
Leu Gly Thr Phe Trp Gly Asp Thr Leu Asn Cys Trp Met Leu Ser Ala
                5
Phe Ser Arg Tyr Ala Arg Cys Leu Ala Glu Gly His Asp Gly Pro Thr
            20
Gln
<210>
       5
<211>
       99
<212> DNA
<213>
       Homo Sapiens
<400>
ttggggacat tttggggtga cacactgaac tgctggatgc tatcagcatt tagtaggtat
```

gctcgatgtc ttgcagaagg acatgatggt cctacacag 99